

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number  
**WO 2004/020445 A3**

(51) International Patent Classification<sup>7</sup>: **C07D 207/325**,  
257/04, 271/06, 261/10, 277/24, 249/08, 207/333, A01N  
43/36, 43/56, 43/653, 43/713, 43/78, 43/80

(74) Common Representative: **SYNGENTA PARTICIPA-  
TIONS AG**; Intellectual Property, P.O. Box, CH-4002  
Basel (CH).

(21) International Application Number:  
PCT/EP2003/009636

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 29 August 2003 (29.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
1487/02 30 August 2002 (30.08.2002) CH

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **SYN-  
GENTA PARTICIPATIONS AG** [CH/CH]; Schwarzwald-  
dallee 215, CH-4058 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ZAMBACH**,  
Werner [CH/CH]; Syngenta Crop Protection AG,  
Schwarzwaldallee 215, CH-4058 Basel (CH). **STEIGER**,  
Arthur [CH/CH]; Syngenta Crop Protection AG,  
Schwarzwaldallee 215, CH-4058 Basel (CH). **RENOLD**,  
Peter [CH/CH]; Syngenta Crop Protection AG, Schwar-  
waldallee 215, CH-4058 Basel (CH). **TRAH**, Stephan  
[DE/CH]; Syngenta Crop Protection AG, Schwarzwald-  
allee 215, CH-4058 Basel (CH). **HALL**, Roger, Graham  
[GB/CH]; Syngenta Crop Protection AG, Schwarzwaldallee  
215, CH-4058 Basel (CH).

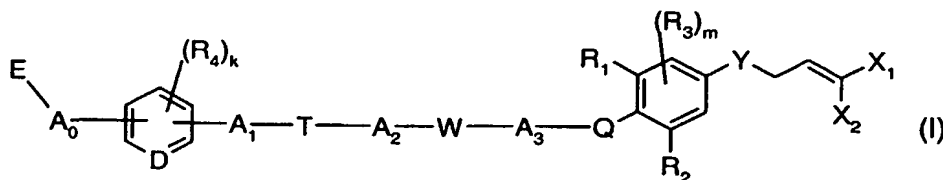
Published:

— with international search report  
— before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the international search report:  
15 April 2004

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: 4-(3,3-DIHALO-ALLYLOXY) PHENOL DERIVATIVES HAVING PESTICIDAL PROPERTIES



(57) Abstract: Compounds of formula (I) wherein A<sub>0</sub> is a bond or a C<sub>1</sub>-C<sub>6</sub>alkylene bridge; A<sub>1</sub>, A<sub>2</sub> and A<sub>3</sub> are a C<sub>1</sub>-C<sub>6</sub>alkylene bridge; D is CH or N; W is, for example, O, S, SO, SO<sub>2</sub>, -C(=O)-O- or -O-C(=O)-; T is a bond or, for example, O, NH, S, SO or SR<sub>2</sub>; Q is, for example, O, S, SO or SO<sub>2</sub>; Y is, for example, O, S, SO or SO<sub>2</sub>; X<sub>1</sub> and X<sub>2</sub> are each independently of the other fluorine, chlorine or bromine; R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, for example, H, halogen, OH, SH, CN or nitro; R<sub>4</sub> is, for example, H, halogen, OH, SH, CN, nitro or C<sub>1</sub>-C<sub>6</sub>alkyl; R<sub>5</sub> is, for example, H, CN, OH, C<sub>1</sub>-C<sub>6</sub>alkyl or C<sub>3</sub>-C<sub>8</sub>cycloalkyl; k is 1, 2 or 3 when D is nitrogen; or is 1, 2, 3 or 4 when D is CH; m is 1 or 2; E is heteroaryl which is unsubstituted or substituted - depending upon the substitutions possible on the ring - by from one to four identical or different substituents selected from R<sub>10</sub>; and R<sub>10</sub> is, for example, halogen, CN, NO<sub>2</sub>, OH, SH or C<sub>1</sub>-C<sub>6</sub>alkyl; and, where applicable, their possible E/Z isomers, E/Z isomeric mixtures and/or tautomers, in each case in free form or in salt form, a process for the preparation of those compounds and their use, pesticidal compositions in which the active ingredient has been selected from those compounds or an agrochemically acceptable salt thereof, a process for the preparation of those compositions and their use, plant propagation material treated with those compositions, and a method of controlling pests.

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/09636

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D207/325 C07D257/04 C07D271/06 C07D261/10 C07D277/24  
 C07D249/08 C07D207/333 A01N43/36 A01N43/56 A01N43/653  
 A01N43/713 A01N43/78 A01N43/80

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/04228 A (SUMITOMO CHEMICAL COMPANY) 15 February 1996 (1996-02-15) claims 1-92	1-7
Y	WO 97/27173 A (SUMITOMO CHEMICAL COMPANY) 31 July 1997 (1997-07-31) claims 1-28	1-7
P, Y	WO 03/042147 A (BAYER CROPS SCIENCE S.A.) 22 May 2003 (2003-05-22) claims 1-27	1-7
E	WO 2004/002943 A (SYNGENTA PARTICIPATIONS AG) 8 January 2004 (2004-01-08) claims 1-8	1-7
	----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

2 March 2004

Date of mailing of the international search report

10/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Herz, C

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/EP 03/09636

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 96/33160 A (SUMITOMO CHEMICAL COMPANY) 24 October 1996 (1996-10-24) claims 1-80 -----	1-7
Y	WO 96/11909 A (SUMITOMO CHEMICAL COMPANY) 25 April 1996 (1996-04-25) claims 1-77 -----	1-7

# INTERNATIONAL SEARCH REPORT

Inventor's name and patent family members

International Application No.

PCT/EP 03/09636

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9604228	A	15-02-1996	AT 172448 T	15-11-1998
			AU 692894 B2	18-06-1998
			AU 2936995 A	04-03-1996
			BR 9506309 A	05-08-1997
			CA 2172709 A1	15-02-1996
			CN 1137265 A ,B	04-12-1996
			CZ 9601296 A3	11-09-1996
			DE 69505490 D1	26-11-1998
			DE 69505490 T2	24-06-1999
			DK 722430 T3	28-06-1999
			EG 20622 A	31-10-1999
			EP 0722430 A1	24-07-1996
			ES 2124570 T3	01-02-1999
			HU 75028 A2	28-03-1997
			IL 114724 A	01-06-2000
			IL 126135 A	29-02-2000
			IL 126136 A	29-02-2000
			WO 9604228 A1	15-02-1996
			JP 8337549 A	24-12-1996
			RU 2144526 C1	20-01-2000
			SK 56896 A3	07-05-1997
			TR 960119 A2	21-06-1996
			US 5872137 A	16-02-1999
			ZA 9506312 A	04-03-1996
WO 9727173	A	31-07-1997	AU 1399297 A	20-08-1997
			JP 9263572 A	07-10-1997
			WO 9727173 A2	31-07-1997
			ZA 9700559 A	30-07-1997
WO 03042147	A	22-05-2003	DE 10155385 A1	28-05-2003
			WO 03042147 A1	22-05-2003
			US 2004029886 A1	12-02-2004
WO 2004002943	A	08-01-2004	WO 2004002943 A1	08-01-2004
WO 9633160	A	24-10-1996	AU 5287896 A	07-11-1996
			DE 69610204 D1	12-10-2000
			DE 69610204 T2	03-05-2001
			EG 20723 A	29-12-1999
			EP 0824514 A1	25-02-1998
			IL 117943 A	06-12-2000
			IL 130542 A	06-12-2000
			JP 9249610 A	22-09-1997
			WO 9633160 A1	24-10-1996
			US 6028100 A	22-02-2000
			US 6214835 B1	10-04-2001
			US 5952386 A	14-09-1999
			ZA 9602968 A	22-10-1996
WO 9611909	A	25-04-1996	AT 191477 T	15-04-2000
			AU 692930 B2	18-06-1998
			AU 3672895 A	06-05-1996
			BR 9509315 A	26-05-1998
			CA 2202495 A1	25-04-1996
			CN 1318535 A	24-10-2001
			CN 1169147 A ,B	31-12-1997
			CZ 9701060 A3	18-03-1998

# INTERNATIONAL SEARCH REPORT

Inventor's name (if different from patent family members)

International Application No.

PCT/EP 03/09636

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9611909	A	DE 69516160 D1	11-05-2000
		DE 69516160 T2	24-08-2000
		DK 785923 T3	31-07-2000
		EG 21672 A	27-02-2002
		EP 0785923 A1	30-07-1997
		ES 2145301 T3	01-07-2000
		GR 3033311 T3	29-09-2000
		HU 77014 A2	02-03-1998
		IL 115597 A	26-07-2000
		IL 130672 A	16-07-2000
		IL 130673 A	26-07-2000
		IL 130674 A	16-07-2000
		WO 9611909 A1	25-04-1996
		JP 3106928 B2	06-11-2000
		JP 9151172 A	10-06-1997
		JP 2000355582 A	26-12-2000
		OA 10412 A	04-12-2001
		RU 2158260 C2	27-10-2000
		SK 45097 A3	06-05-1998
		US 2003073847 A1	17-04-2003
		US 6071861 A	06-06-2000
		US 6268313 B1	31-07-2001
		US 5922880 A	13-07-1999
		US 6376428 B1	23-04-2002
		ZA 9508652 A	14-05-1996
		TR 960310 A2	21-06-1996